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| 10/642,750 | 08/19/2003 | Norihito Fujita | 040405-0364 | 3763 |

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| EXAMINER |
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KEEFER, MICHAEL E

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2112

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/642,750

Applicant(s)

FUJITA ET AL.

Examiner

Michael E. Keefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: A System and Method for External Resolution of Packet Transfer Information.

Claim Objections

4. Claims 1-53 are objected to because of the following informalities:

Regarding **claim 1**, the word "the" in line 1 should be deleted and replaced with the word --a-- because the phrase "the received packet" lacks antecedent basis.

In line 2, the word "that" should be deleted, and --:-- should be added after the word "by" to improve the clarity of the claim.

In line 6, the word “the” should be deleted and replaced with –a—because the phrase “the transfer method” lacks antecedent basis.

Similar corrections are required in **claims 3-4**.

Regarding **claim 1**, the word “the” in line 1 should be deleted and replaced with the word –a-- because the phrase “the received packet” lacks antecedent basis.

In line 2, the word “that” should be deleted, and --:-- should be added after the word “by” to improve the clarity of the claim.

In line 7, the word “the” should be deleted and replaced with –a—because the phrase “the transfer method” lacks antecedent basis.

Regarding **claim 5**, the word “A” in line 1 should be deleted and replaced with –The-- because “A packet transfer equipment” is previously recited in claim 1.

In line 5, the word “of” should be deleted and replaced with –of:-- and the word “the” should be deleted to improve the clarity of the claim.

In line 7, both instances of the word “the” should be deleted as “the information related” and “the information added” lack antecedent basis.

In line 8, the word “the” between “packet,” and “information” should be deleted as well as the word “the” after the word “to” because “the information related to the information deleted” lacks antecedent basis.

In line 9, the word “the” at the end of the line should be deleted to improve the clarity of the claim.

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In line 10, the word “the” between “to” and “control” should be deleted and replaced with the word –a— as the phrase “the control method” lacks antecedent basis and the word “the” between “of” and “route” should be deleted and replaced with the word –a-- as the phrase “the route” lacks antecedent basis.

In line 11, the word “the” at the end of the line should be deleted to improve the clarity of the claim.

In line 12, the word “the” should be deleted and replaced with the word –a— because the phrase “the resource control method” lacks antecedent basis.

Similar corrections are required in **claims 10, 23, and 28**.

Regarding **claim 6**, in line 1 the word “the” should be deleted and replaced with the word –a— as the phrase “the received packet” lacks antecedent basis.

In line 10, the word “the” should be deleted and replaced with the word –a— as the phrase “the transfer method” lacks antecedent basis.

Similar corrections are required in **claims 7-9 and 42-45**.

Regarding **claim 11**, in line 1 the word “A” should be deleted and replaced with the word –The-- to improve the clarity of the claim.

Regarding **claim 12**, in line 1 the word “A” should be deleted and replaced with the word –The-- to improve the clarity of the claim.

In line 6, the word “that” should be deleted, and the word “by” should be deleted and replaced with the word –by:-- to improve the clarity of the claim.

Regarding **claim 13**, in line 1 the word “A” should be deleted and replaced with the word –The-- to improve the clarity of the claim.

In line 6, the first instance of the word “the” should be deleted and replaced with the word –a—and the second instance of the word “the” should be deleted and replaced with the word –an— to improve the clarity of the claim.

Regarding **claim 14**, in line 1 the word “A” should be deleted and replaced with the word –The-- to improve the clarity of the claim.

In line 5, the first instance of the word “the” should be deleted and replaced with the word –a—and the second instance of the word “the” should be deleted and replaced with the word –an— to improve the clarity of the claim.

In line 6, the word “the” should be deleted and replaced with the word –a— to improve the clarity of the claim

Regarding **claim 15**, in line 1 the word “A” should be deleted and replaced with the word –The-- to improve the clarity of the claim.

In line 4, the word “the” between “resolves” and “FQDN” should be deleted and replaced with the word --a-- and the word “the” between “or” and “IP” should be deleted and replaced with the word --an-- to improve the clarity of the claim.

In line 9, the word “the” should be deleted and replaced with the word –a— to improve the clarity of the claim.

Regarding **claim 16**, in line 1 the word “A” should be deleted and replaced with the word –The-- to improve the clarity of the claim.

In line 2, the word “wherein” should be deleted and replaced with the word “therein:” to improve the clarity of the claim.

In line 6, the phrase “the FQDN” should be deleted and replaced with “a FQDN” to improve the clarity of the claim.

In line 7, the word “the” should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 9, the word “the” should be deleted and replaced with the word --an-- to improve the clarity of the claim.

Regarding **claim 17**, in line 1 the word “A” should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 3, the word “the” should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 6, the word “conversion” should be deleted and replaced with the word --conversions-- to improve the clarity of the claim.

Regarding **claim 18**, in line 1 the word “A” should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 3, the word “the” should be deleted to improve the clarity of the claim.

In line 4, the word “the” should be deleted and replaced with --a-- to improve the clarity of the claim.

In line 7, the word --said-- should be inserted between for and resource to improve the clarity of the claim.

Regarding **claim 19**, in line 2, the phrase “by that” should be deleted and replaced with --by:-- to improve the clarity of the claim.

In line 3, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 4, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 5, both instances of the word "the" should be deleted to improve the clarity of the claim.

Similar corrections are required in **claims 20-22 and 46-49**.

Regarding **claim 24**, in line 3, the word "the" should be deleted to improve the clarity of the claim.

In line 5, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 6, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 9, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 10, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 11, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

Similar corrections are required in **claims 25-27**.

Regarding **claim 29**, in line 1 the word "A" should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 4, the word "the" between "collects" and "resource" should be deleted and the word "the" between "in" and "network" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

Regarding **claim 30**, in line 1 the word "A" should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 3, the word "the" should be deleted to improve the clarity of the claim.

In line 4, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 6, the word "the" should be deleted to improve the clarity of the claim.

In line 8, the word --with-- should be inserted between the word "replies" and "the" to improve the clarity of the claim.

Regarding **claim 31**, in line 1 the word "A" should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 4, the word "the" between "describes" and "policy" should be deleted and replaced with the word --a--.

Regarding **claim 36**, in line 1 the word "A" should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 6, the word "the" should be deleted to improve the clarity of the claim.

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In line 8, the word "the" should be deleted to improve the clarity of the claim.

Regarding **claim 38**, in line 1 the word "A" should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 3, the word "the" should be deleted to improve the clarity of the claim.

In line 4, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 5, the word --said-- should be inserted between "for" and "resource" to improve the clarity of the claim.

In line 7, the word --with-- should be inserted between "replies" and "the" to improve the clarity of the claim.

Regarding **claim 39**, in line 1 the word "A" should be deleted and replaced with the word --The-- to improve the clarity of the claim.

In line 4, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

Regarding **claim 40**, --:-- should be inserted at the end of line 1 to improve the clarity of the claim.

In line 4, the word "that" should be deleted, --:-- should be inserted after the word "by", and both instances of the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 5, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 6, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

Regarding **claim 41**, --:-- should be inserted at the end of line 1 to improve the clarity of the claim.

In line 4, the phrase "by that" should be deleted and replaced with --by:-- and both instances of the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 6, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

In line 7, the word "the" should be deleted to improve the clarity of the claim.

Regarding **claim 50**, in line 3 the word "the" between "where" and "IP" should be replaced with --an-- and the word "the" between "to" and "FQDN" should be deleted and replaced with --a-- to improve the clarity of the claim.

In line 5, the word "the" between "in" and "packet" should be deleted and replaced with the word --a-- improve the clarity of the claim.

In line 6, the word "the" should be replaced with the word --a-- to improve the clarity of the claim.

In line 10, the word "the" should be deleted and replaced with the word --a-- to improve the clarity of the claim.

Similar corrections are required for **claims 51-53**.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-39 and 42-53 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding **claims 1-4**, are drawn to packet transfer equipment. In order for a claim to be directed to statutory matter it must have a useful, concrete and tangible result. The equipment fails to produce any "real world" or tangible result as it merely resolves a transfer method without providing it to a user to use or storing it in memory.

Claim 5, which is dependent on claim 1 fails to add a tangible result to the claim, and is thus rejected for the same.

Regarding **claims 6-10**, are drawn to packet transfer equipment comprising a packet information extraction section and a packet transfer method resolution section. In order for a claim to be directed to statutory matter it must have a useful, concrete and tangible result. The mere act of resolving a transfer method fails to produce a real-world result as nothing is provided to a user nor is nothing stored in a memory to be used.

Regarding **claims 11-18**, which are dependent upon claim 6 fail to add a tangible result to the equipment and thus are rejected for the same. In order for a

claim to be directed to statutory matter it must have a useful, concrete and tangible result. There mere act of replying fails to produce a real-world result as nothing is done with the information provided nor is the information stored for later use.

Regarding **claims 19-22**, which are drawn to a packet transfer method resolution server, which upon receiving request from a packet transfer equipment inquiring information related to a transfer method, one or more types of information are replied to said packet transfer equipment.

Claim 23, which is dependent on claim 19 fails to add any tangible result output to the server, therefore is rejected for the same.

Regarding **claims 24-27**, which are drawn towards a packet transfer method resolution server comprising a packet transfer method database and a packet transfer method resolution request acceptance section. In order for a claim to be directed to statutory matter it must have a useful, concrete and tangible result. The mere act of replying with one or more type of information related to the transfer method to the packet transfer equipment fails to produce a real-world result as nothing is done with the information provided nor is the information stored for later use.

Claims 28-31, which are dependent on claim 24 fail to add any tangible result output to the server, therefore are rejected for the same.

Regarding **claims 32-35**, which are drawn to a DNS server comprising an IP/FQDN correspondence database and a DNS resolution request acceptance

section. In order for a claim to be directed to statutory matter it must have a useful, concrete and tangible result. The mere act of replaying with information to the packet transfer equipment fails to produce a real-world result as nothing is done with the information provided nor is the information stored for later use.

Claims 36-39, which are dependent on claim 32, fail to add a tangible result to the DNS server and so are rejected for the same.

Regarding **claims 42-53**, which are drawn towards programs. In order to be statutory subject matter a claim must fall into one of the four statutory categories of invention: process, machine, composition of matter or manufacture. Claims 42-53 are drawn to only functional descriptive material (i.e. a program), which falls outside of the statutory categories of invention.

Regarding **claims 42-45**, which are drawn toward a program to have a computer function as a packet transfer equipment. In order for a claim to be directed to statutory matter it must have a useful, concrete and tangible result. The program fails to produce any "real world" or tangible result as it merely resolves a transfer method without providing it to a user to use or storing it in memory.

Regarding **claims 46-40**, which are drawn toward a program to have a computer function as a packet transfer method server. In order for a claim to be directed to statutory matter it must have a useful, concrete and tangible result. The mere act of replaying with information to the packet transfer equipment fails

to produce a real-world result as nothing is done with the information provided nor is the information stored for later use.

Regarding **claims 50-53**, which are drawn toward a program to have a computer function as a DNS server. In order for a claim to be directed to statutory matter it must have a useful, concrete and tangible result. The mere act of replaying with information to the packet transfer equipment fails to produce a real-world result as nothing is done with the information provided nor is the information stored for later use.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-18, 32-39 and 50-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Regarding **claims 1-2 and 4**, the phrase "one or more type of information obtained." in lines 9-10 is confusing, as it is unclear what information has been obtained from where, and how it relates to either several or one or more types of information extracted from the packet.

Regarding **claim 3**, the phrase “several types of information obtained” in lines 9-10 is confusing, as it is unclear what information has been obtained from where, and how it relates to one or more types of information extracted from the packet.

Regarding **claim 5**, which is rejected for dependent upon rejected claim 1, is also rejected because the phrase “the information resolved” in line 3 is confusing, as there is no information resolved in claim 1, the transfer method is resolved.

Regarding **claims 6-9**, the phrase “and resolves the transfer method of said received packet” in lines 11-12 is confusing because it is unclear what is doing the act of resolving.

Claims 10-18 are rejected for being dependent upon rejected claim 6.

Regarding **claim 10**, the phrase “the information” as recited in lines 3 and 4 is confusing, as it is recited as “the information resolved” in line 3 and as “the information related” line 4 and the relationship between the two is unclear, especially as far as whether there are two separate sets of information or not.

Regarding **claim 23**, which is rejected as being dependent upon rejected claim 19, is also rejected because the phrase “the information” in lines 3 and 4 are confusing, as it is recited as “the information replied” in line 3 and as “the information related” in line 4 and the relationship between the two is unclear, especially as far as whether there are actually two different sets of information.

Regarding **claims 32-39 and 50-53**, the recitation of “the IP address corresponding to the FQDN and the FQDN corresponding to the IP address” in lines 3-4 is confusing because it is unclear whether the IP address recited in line 3 is in fact the same IP address that is recited in line 4; the same confusion applying to the use of FQDN. In addition, the word “registered” in line 4 is confusing, as its placement makes no grammatical sense within the scope of the claim as far as what is being registered where. Claims 36-39 are rejected for being dependent on rejected claim 32.

Regarding **claim 39**, in addition to being rejected as dependent upon rejected claim 32 is further rejected because it is unclear where “a request for resource control” as claimed in line 5 is being sent, it is inferred by the examiner that claim 39 was intended to have the request for resource control sent to the packet transfer equipment similar to what is claimed in claim 31, in that case the examiner suggests adding the phrase --.

Regarding **claims 50-53**, the recitation of “a function” in lines 12 and 19 of claims 50 and 52, and in lines 13 and 20 of claims 51 and 53 is confusing because it is unclear whether there is only one function or two separate functions.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-10, 19-28, and 42-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller et al. (US 6128666), hereafter Muller.

Regarding **claim 1**, Muller discloses:

A packet transfer equipment (Fig. 2) that transfers the received packet to another node characterized by:

The packet transfer equipment specifies (by forwarding the packet header to the search engine, it specifies all of the types of information contained in the header as "several types" Col. 7 lines 42-43) several types of information contained in said received packet (Fig. 5, step 510), inquires (see Fig. 6, Steps 615 and 620, where the header is sent to the search engine, and it then waits for a reply (decision); thus, the IPP is asking the search engine to make a decision) of an external server (search engine 315) about one or more type of information related to the transfer method (VLAN tag or Destination address, see Col 2 lines 5-9) of said received packet and resolves (note Fig. 6, steps 625, 645, where decisions are made based off of the response from the Search Engine) the transfer method of said received packet according to one or more type of information obtained (Fig. 5, step 520).

Regarding **claim 2**, Muller discloses:

All the limitations of claim 2 as cited above, and also the additional limitation that one or more type of information in said received packet that is determined for each of said received packet (each packet's header is forwarded to the search engine, thus each packet could have different header information and different information would be forwarded to the search engine.)

Regarding **claim 3**, Muller discloses:

The limitations of claim 3 as cited in the rejection of claim 1 include that several types of information are replied to the packet transfer equipment (the VLAN tag and destination address are several types of information, as well as one or more).

Regarding **claim 4**, Muller discloses:

All the limitations of claim 4 as cited in the rejection of claim 1 and the additional limitation that the information related to the transfer method is determined for each of said received packet (since each packet is searched separately, the information related to the transfer method is determined for each of said received packet).

Regarding **claim 5 and as applied to claim 1**, Muller discloses:

The information resolved by said external server (search engine 315) ... contains at least one of: information related to rewriting (VLAN tag and/or destination address as cited in claim 1).

Regarding **claims 6-9**, Muller discloses:

A packet transfer equipment that transfers the received packet to another node comprising:

A packet information extraction section (IPP, note step 510 in Fig. 5) that extracts several (or one or more) types of information contained in said received packet (by forwarding the packet header to the search engine, it extracts all of the types of information contained in the header as "several types" Col. 7 lines 42-43), and a packet transfer method resolution section (search engine 315) that specifies said several types of information extracted by said packet information extraction section and inquires (Col. 7, lines 43-46, the database is asked to determine the type of packet and routing information, based off of the extracted packet headers which are specified in communication to the database) of an external server (database 320) about one or more (or several) type of information related to the transfer method of said received packet and resolves the transfer method of said received packet according to one or more (or several) type of information obtained. (Col. 7, lines 46-49 and lines 50-53 describe resolving returned into the packet)

Regarding **claim 10 and as applied to claim 6**, Muller discloses:

That the information resolved contains at least one of: information related to the rewriting of the information contained in the received packet (VLAN tag and/or destination address, Col. 2 lines 5-9).

Regarding **claims 19-22**, Muller discloses:

A packet transfer method resolution server (search engine 315) characterized by:

Upon a request from the packet transfer equipment (IPP 310) that transfers the received packet to another node inquiring the information related to the transfer method of said received packet and specifying several types of information contained in said received packet (Note that in Fig. 5, step 510, IPP sends a copy of the packet header to the search engine; the header containing the specified types of information contained in the received packet. The sending is a request, or inquiry because as shown in Fig. 6 step 620, the IPP waits for a response, or answer from the search engine before continuing after sending the header to the search engine), one or more type of information related to the transfer method of said received packet is replied to said packet transfer equipment (Col 8 lines 9-12, note that several types of information are listed).

Regarding **claim 23 and as applied to claim 19**, Muller discloses:

That the information resolved contains at least one of: information related to the rewriting of the information contained in the received packet (VLAN tag and/or destination address, Col. 2 lines 5-9).

Regarding **claims 24-27**, Muller discloses:

A packet transfer method database (database 320) where the correspondences between several types of information contained in the packet and one or more type of information related to the packet transfer

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method are registered (inherently, database 320 must hold information about the transfer method(s) of packets or else the search engine would be unable to refer to it as disclosed in Col. 7 lines 43-44), and

a packet transfer method resolution request acceptance section (search engine 315) that accepts the packet transfer method resolution request from the packet transfer equipment (IPP 310, inherently the search engine 315 must accept the packet header forwarded by IPP 310 or else the invention would be inoperable) that transfers the received packet to another node inquiring the information related to the transfer method of said received packet and specifying several types of information contained in said received packet, refers to said packet transfer method database (Col. 7 lines 43-44) and replies one or more type of information related to the transfer method of said received packet to said packet transfer equipment (Fig. 5 step 515, Col. 8 lines 9-12).

Regarding **claim 28 and as applied to claim 24**, Muller discloses:

That the information replied contains at least one of: information related to the rewriting of the information contained in the received packet (VLAN tag and/or destination address, Col. 2 lines 5-9).

Regarding **claims 42-45**, Muller discloses all the limitations of these claims as cited in the above rejection of claims 1-4 which are nearly identical in structure except that claims 42-45 are directed to a software implementation; which is anticipated by Muller inherently.

Regarding **claims 46-49**, Muller discloses all the limitations of these claims as cited in the above rejection of claims 24-27 which are nearly identical in structure except that claims 42-45 are directed to a software implementation; which is anticipated by Muller inherently.

11. Claims 24, 29, 32-37, and 50-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Ebrahim (US 6154777).

Regarding **claim 24**, Ebrahim discloses:

A packet transfer method resolution server (Fig. 4 Server 150) comprising:

a packet transfer method database (Fig. 4 Memory 170 can hold the data used by Name Resolver 180, i.e. Col. 4 64-65, multiple binding tables) where the correspondences between several types of information contained in the packet and one or more type of information related to the packet transfer method are registered, and

a packet transfer method resolution request acceptance section (Fig. 4 Name Resolver 180) that accepts the packet transfer method resolution request from the packet transfer equipment that transfers the received packet to another node inquiring the information related to the transfer method of said received packet (Fig.4 Requester 1 100, Fig. 3, step 20) and specifying several types of information contained in said received packet, (Col 5 items listed under A. (lines 23-38)) refers to said packet transfer method database (it is inherent that in order to resolve the

information and provide a response to the requester that the binding tables must be consulted as part of step 30 in Fig. 3) and replies one or more type of information related to the transfer method of said received packet to said packet transfer equipment (note the last step of claim 14, wherein the destination address is transmitted to the requester).

Regarding **claim 29 as applied to claim 24**, Ebrahim discloses:

a resource information collection section (Col. 2, lines 49-56 describe that the DNS server must have a way of knowing information about network resources) and

an entry rewriting section (Col. 2, lines 49-56 describe that the DNS server will alter its tables based off of the information obtained about the network.)

Regarding **claims 32-35 and 50-53**, Ebrahim discloses:

A DNS server (Fig. 4 Server 150) comprising:

an IP address/FQDN correspondence database (Fig. 4 memory 170 can hold the data used by Name Resolver 180 to resolve a domain name or IP address i.e. Col. 4 64-65, multiple binding tables) and

a DNS resolution request acceptance section (Fig. 4 Name Resolver 180) that accepts the IP address resolution request inquiring the IP address corresponding to the FQDN from the packet transfer equipment that transfers the received packet to another node, (Step 20, Fig. 3) refers to said IP address/FQDN correspondence database (Fig. 3

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Step 30) and replies the IP address corresponding to said FQDN to said packet transfer equipment (Claim 14, "transmitting said destination address to said requester) as well as accepts the FQDN resolution request inquiring the FQDN corresponding to the IP address from said packet transfer equipment, refers to said IP address/FQDN correspondence database and replies the FQDN corresponding to said IP address to said packet transfer equipment (It is inherent for a DNS server to be able to accept rDNS (or reverse DNS) requests, i.e. the resolving of a name from an IP address).

Ebrahim further inherently discloses that the DNS server may be implemented in software (a program as stated in claims 50-53).

Regarding **claim 36 and as applied to claim 32**, Ebrahim discloses:

the FQDN or the IP address replied by said DNS resolution request acceptance section to said packet transfer equipment uniquely indicates the information related to one or more arbitrary transfer method contained in the processing method of rewriting, addition and deletion for one or more arbitrary piece of information in said received packet and/or the route through which said received packet is transferred and the resource control method for said route. (By processing a DNS or reverse DNS request the DNS server replies with information related to rewriting, or, deleting and adding information in a stored packet (either the IP

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address or domain name) with information retrieved by the server (a new IP address or domain name) inherently.)

Regarding **claim 37 and as applied to claim 32**, Ebrahim discloses:

a resource information collection section (Col. 2, lines 49-56 describe that the DNS server must have a way of knowing information about network resources) and

an entry rewriting section (Col. 2, lines 49-56 describe that the DNS server will alter its tables based off of the information obtained about the network.)

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-10, 19-29, and 40-49 rejected under 35 U.S.C. 102(e) as being anticipated by Petersen, et al. (US 6985964 B1) hereafter Petersen.

Regarding **claims 1-4**, Petersen discloses:

A packet transfer equipment (Fig. 1) that transfers the received packet to another node characterized by:

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the packet transfer equipment specifies several types of information contained in said received packet (Col 3 lines 21-35, describes that a parser assigns a vector to a packet indicating to a central processor what data should be retrieved from a packet for each packet), inquires of an external server (search engine PP 140, which in Col 2 lines 53-60 lists that it can be implemented on a separate computer or server from any other PPs or the central processor, the inquiry is made by the delivery of a search argument or request Col 3. Lines 45-48) about one or more type of information related to the transfer method (see Col 3 lines 49-56 for exemplary types of information that can be returned) of said received packet and resolves the transfer method of said received packet according to one or more type of information obtained (Editor PP 150 performs this function, and can be either part of the central processor or the search engine PP 140 itself (Col 2 lines 66-67).

Regarding **claim 5 and as applied to claim 1**, Petersen discloses:

The information resolved by said external server (search engine 315) contains at least one of: information related to rewriting (Col 3 lines 49-56 describe information which can be returned by the search engine PP 140).

Regarding **claims 6-9 and 42-45**, Petersen discloses:

A packet transfer equipment that transfers the received packet to another node comprising:

A packet information extraction section (Packet deconstructor PP 120) that extracts several (or one or more) types of information contained in said received packet (Col 3 lines 39-41 state that the deconstructor pulls or extracts information from the packet), and

a packet transfer method resolution section (Central Processor 110, see Col. 3 lines 46-49) that specifies said several types of information extracted by said packet information extraction section (search argument as stated in Col. 3 lines 43-48) and inquires of an external server (Search engine PP 140, note in Col. 3 lines 45-48 the argument is delivered to the search engine for searching) about one or more (or several) type of information related to the transfer method of said received packet and resolves the transfer method of said received packet according to one or more (or several) type of information obtained (Col. 3 lines 56-57 where the search result is returned to the central processor).

Petersen further discloses that his invention may be implemented in software (Col. 5 lines 6-8).

Regarding claim 10 and as applied to claim 6, Petersen discloses:

That the information resolved contains at least one of: information related to the rewriting of the information contained in the received packet (Col 3 lines 49-56 describe information which can be returned by the search engine PP 140).

Regarding claim 17 and as applied to claim 6, Petersen discloses:

A service input section (Packet parser 120 determines a service type or vector for the packet)

An extracted packet information conversion section (central processor 110, see Col 3 lines 60-63, which show that in an exception (i.e. a certain service type determined by Packet parser 120) the central processor can modify the destination returned by the lookups.)

Regarding **claims 19-22**, Petersen discloses:

A packet transfer method resolution server (search engine PP 140) characterized by:

Upon a request from the packet transfer equipment (Central Processor 110 or Packet deconstructor PP 130) that transfers the received packet to another node inquiring the information related to the transfer method of said received packet and specifying several types of information contained in said received packet (Note that a search argument, containing information pulled from a packet is sent to the search engine PP (Col. 3, lines 35-48) as a request for results on information in the packet that may be changed), one or more type of information related to the transfer method of said received packet is replied to said packet transfer equipment (Col 3 lines 56-57).

Regarding **claim 23 and as applied to claim 19**, Petersen discloses:

That the information resolved contains at least one of: information related to the rewriting of the information contained in the received packet

(Col 3 lines 49-56 describe information which can be returned by the search engine PP 140).

Regarding **claims 24-27 and 46-49**, Petersen discloses:

a packet transfer method database (a database is inherent because in Col. 3 lines 53-54 "routing lookups" is disclosed, and a lookup must have a database to reference to obtain data) where the correspondences between several types of information contained in the packet and one or more type of information related to the packet transfer method are registered, and

a packet transfer method resolution request acceptance section (search engine PP 140) that accepts the packet transfer method resolution request from the packet transfer equipment (Central processor 110 or Packet deconstructor 130) that transfers the received packet to another node inquiring the information related to the transfer method of said received packet and specifying several types of information contained in said received packet, (Note that a search argument, containing information pulled from a packet is sent to the search engine PP (Col. 3, lines 35-48) as a request for results on information in the packet that may be changed) refers to said packet transfer method database (note that various types of routing lookups can be performed. Col. 3, lines 53-54) and replies one or more type of information related to the transfer method

of said received packet to said packet transfer equipment (Col 3 lines 56-57).

Petersen further discloses that his invention may be implemented in software (Col. 5 lines 6-8).

Regarding **claim 40**, Petersen discloses:

A network system (Fig 1) comprising:

a packet transfer equipment (Central Processor 110) and a packet transfer method resolution server or a DNS server (Search Engine PP), and characterized by that the policy to guide the request packet from the user requesting contents or application services to the server of a particular provider is described in said packet transfer method resolution server or said DNS server (All packets are searched in the Search Engine PP to determine the policy for each individual packet, see Fig. 2).

Regarding **claim 41**, Petersen discloses:

A network system (Fig 1) comprising:

a packet transfer equipment (Central Processor 110) and a packet transfer method resolution server or a DNS server (Search Engine PP), and characterized by that the policy to execute the transfer control of the request packet from the user requesting said contents or application services provided by the contents or application service provider based on the context information of said user is described in said packet transfer method resolution server or said DNS server (All packets are searched in

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the Search Engine PP to determine the policy for each individual packet, see Fig. 2, based off of any fields or context information selected by the parser PP 120, Central Processor 110, or Packet Deconstructor PP 130; see Col 3 lines 21-25 and 64-67).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 6 above, and further in view of Ebrahim.

Regarding **claim 14**,

Petersen discloses all the limitations of claim 14 except for the packet transfer method resolution section uniquely recognizing the transfer method of a packet based off of a domain name or IP address.

The general concept of address resolution to obtain a unique destination is well known in the networking art as taught by Ebrahim, which teaches a Name resolver, which will recognize a transfer method of a domain name or IP address.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the search engine PP of Petersen with the general

concept of address resolution as taught by Ebrahim in order to make the search engine PP more versatile.

Regarding **claim 15**,

Petersen discloses all the limitations of claim 15 except for the packet transfer method resolution section repeating a request for resolution to a domain resolution server.

The general concept of address resolution to obtain a unique destination is well known in the networking art as taught by Ebrahim, which teaches a Name resolver, which will recognize a transfer method of a domain name or IP address.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the search engine PP of Petersen with the general concept of address resolution as taught by Ebrahim in order to make the search engine PP more versatile.

The general concept of repeating requests that fail is well known in the networking art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the search engine PP of Petersen and the concept of address resolution with the general concept of repeating requests in order to reduce the amount of error conditions.

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 6 above, and further in view of Huitema (US 6016512).

Regarding **claim 12**,

Petersen discloses all the limitations of claim 12 except for a packet transfer storage table and that the packet transfer method resolution section checks to see if the transfer method has been stored in the packet transfer storage table before querying an external server for the information.

The general concept of caching previous values queried from an external server is well known in the networking art as taught by Huitema in Fig. 2. (Note that a query is made to local server 120, which then stores the answer to the query in step 165, so that when the query is made again in step 167 from the local computer 110 the local server 120 does not query any remote servers.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer equipment of Petersen with the general concept of caching previously requested values as taught by Huitema in order to reduce the amount of network traffic to the external server.

17. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 6 above, and further in view of Roberts (US 2002/0080786 A1).

Regarding **claim 11**,

Petersen discloses all the limitations of claim 11 except for the extractor extracting information over two or more packets.

The general concept of grouping packets together to route together is well known in the networking art as taught by Roberts. (Similar packets are grouped together so that one QoS request can be made.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer equipment of Peterson with the general concept of grouping packets together as taught by Roberts in order to decrease the amount of queries made to the external server for transfer information.

18. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 6 above, and further in view of Loucks et al. (US 5434974) hereafter Loucks.

Regarding **claim 13**,

Petersen discloses all of the limitations of claim 13 except for the packet transfer method resolution section creating a FQDN or IP address indicating the information contained in said received packet.

The general concept of creating a unique name to identify a transfer method is well known in the art as taught by Loucks (Col. 5 lines 53-66 where it is taught that a name contains an address space which is a set of addresses for objects defined in the naming system, which may be any type of information extracted from a received packet).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer equipment disclosed by Petersen with the general concept of creating a unique name as taught by Loucks in order to make the system more interoperable with external networks.

19. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 6 above, and further in view of Loucks and Wesinger, Jr. et al. (US 5870550) hereafter Wesinger.

Regarding **claim 16**,

Petersen discloses all of the limitations of claim 13 except for the packet transfer method resolution section creating a FQDN indicating the information contained in said received packet.

The general concept of creating a unique name to identify a transfer method is well known in the art as taught by Loucks (Col. 5 lines 53-66 where it is taught that a name contains an address space which is a set of addresses for objects defined in the naming system, which may be any type of information extracted from a received packet).

It would have been obvious to one of ordinary skill in the art to combine the packet transfer equipment disclosed by Petersen with the general concept of creating a unique name as taught by Loucks in order to make the system more interoperable with external networks.

Petersen and Loucks disclose all of the limitations of claim 16 as cited above except for the packet transfer equipment resolving the FQDN into an IP address, and then resolving the IP address into a FQDN to determine the transfer method of the packet.

The general concept of checking that an address resolves to the same name that it was resolved from is well known in the art as taught by Wesinger (Col. 6 lines 29-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer equipment taught by Petersen and Loucks with the general concept of checking that an address resolves to the same name that it was resolved from as taught by Wesinger in order to more securely route packets through the network.

20. Claims 31 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebrahim as applied to claims 24 and 32 above, and further in view of Squire et al. (US 7139838 B1) hereafter Squire.

Regarding **claims 31 and 39**,

Ebrahim discloses all of the limitations of claims 31 and 39 except for a packet transfer policy description section and an entry rewriting section.

The general concept of using a policy to rewrite network transfer method information is well known in the art as taught by Squire (note policy software module 106, which filters updates to network transfer information (Col. 2 lines 50-53) before deciding to distribute the information (i.e. re-write the databases) of peer equipments (Col 3 lines 2-6)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the resolution server of Ebrahim with the general concept of using a policy to rewrite network transfer method information as

taught by Squire in order to ensure the integrity of the transfer method information.

21. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 6 above, and further in view of Metin et al. (US 2002/0031142 A1) hereafter Metin.

Regarding **claim 18**,

Petersen discloses all of the limitations of claim 18 except for a resource control section that makes a request for resource control of another node.

The general concept of a packet transfer equipment making a resource control request is well known in the art as taught by Metin ([0040] lines 3-7 describes a method of a switch reserving network resources if necessary).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer equipment described by Petersen with the general concept of a packet transfer equipment making a resource control request as taught by Metin in order to ensure a quality of service for transferred packets.

22. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebrahim as applied to claim 32 above, and further in view of Metin.

Regarding **claim 39**,

Ebrahim discloses all of the limitations of claim 39 except for the DNS server comprising a resource control section that makes a request for resource control of another node.

The general concept of making a resource control request is well known in the art as taught by Metin ([0040] lines 3-7 describes a method of a switch reserving network resources if necessary).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the DNS server of Ebrahim with the general concept of making a resource control request as taught by Metin in order to free resources from the packet transfer equipment so that packets may be transferred more quickly.

23. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen as applied to claim 24 above, and further in view of Metin.

Regarding **claim 31**,

Petersen discloses all the limitations of claim 31 except for the packet transfer resolution server sending a request for resource control as additional information to the packet transfer equipment.

The general concept of a packet transfer equipment needing to know if resource control is necessary is well known in the art as taught by Metin ([0039] lines 14-17 indicates that the required resources are indicated in a request for a packet transfer session).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the packet transfer control method resolution server of Petersen with the general concept of a packet transfer equipment needing to

know if resource control is necessary as taught by Metin in order to make sure that a packet receives the quality of network resources that it needs.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Keefer whose telephone number is (571) 270-1591. The examiner can normally be reached on Monday-Thursday 8am-5pm, second Fridays 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on (571) 270-1808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEK 12/12/2006

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz Jules', is written over the printed name and title.